

# VOLUNTEER THINKING

## AfricaMap

mapping the entire african continent



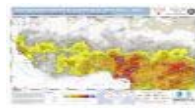
*UNOSAT is the UN Institute for Training and Research (UNITAR) Operational Satellite Applications Programme, implemented in co-operation with the UN Office for Project Services (UNOPS) and the European Organisation of High Energy Physics (CERN).*



## What We Do

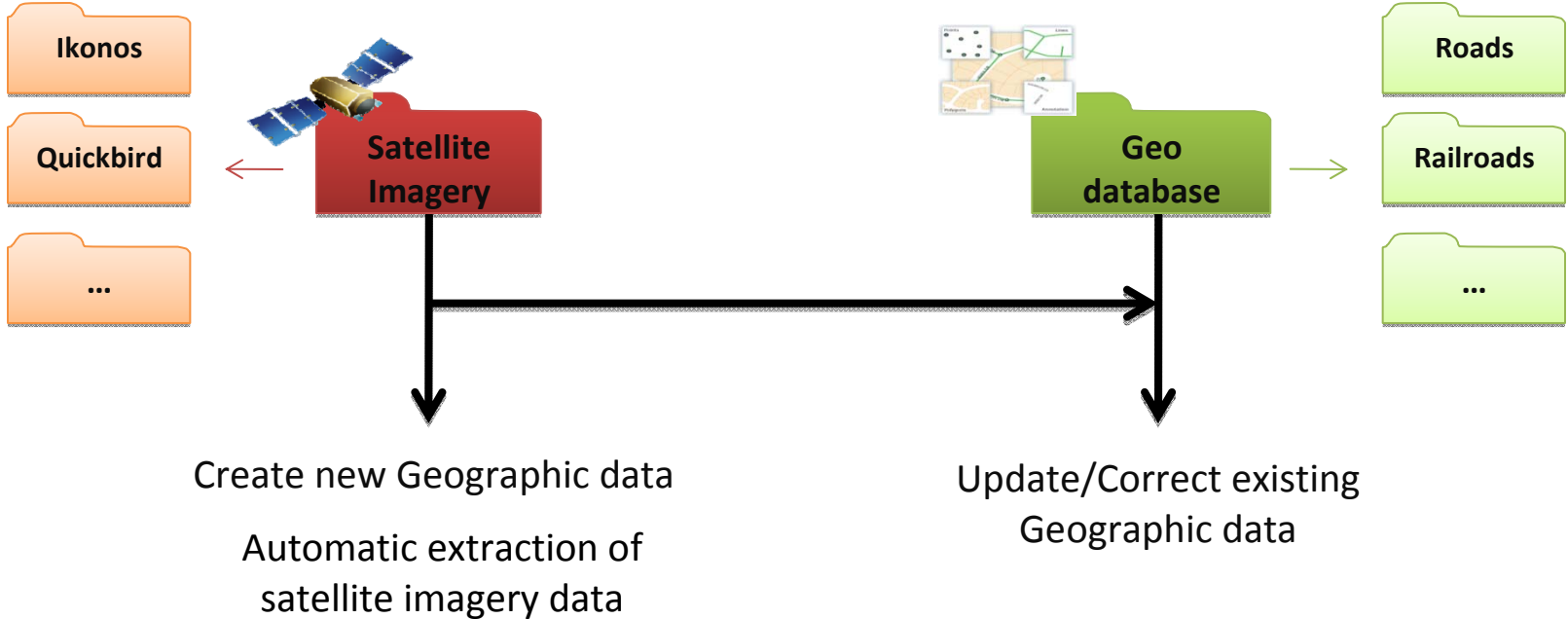
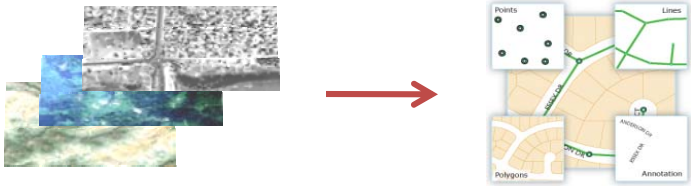
- ✓ Provide satellite based solutions to the UN, local governments, international organizations and NGOs
- ✓ Support early warning, crisis response, human rights, sustainable recovery, vulnerability reduction and local capacity building

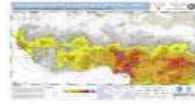




# AfricaMap Project

The volunteers will look to satellite imagery supplied by UNOSAT over the African Continent and search for roads, bridges, human settlements, rivers, agriculture fields, barren fields and more.

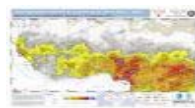




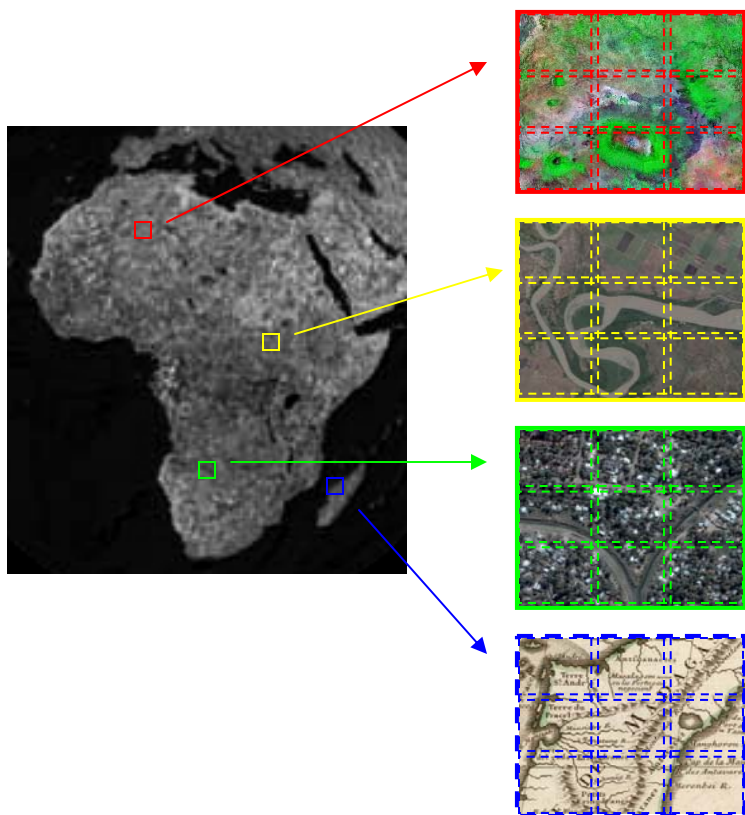
## Motivation

- ✓ Lack of updated geo information
- ✓ All UN geographic data is spread in different platforms and formats
- ✓ Historic maps and imagery are not being used





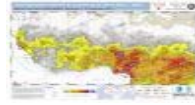
## Application



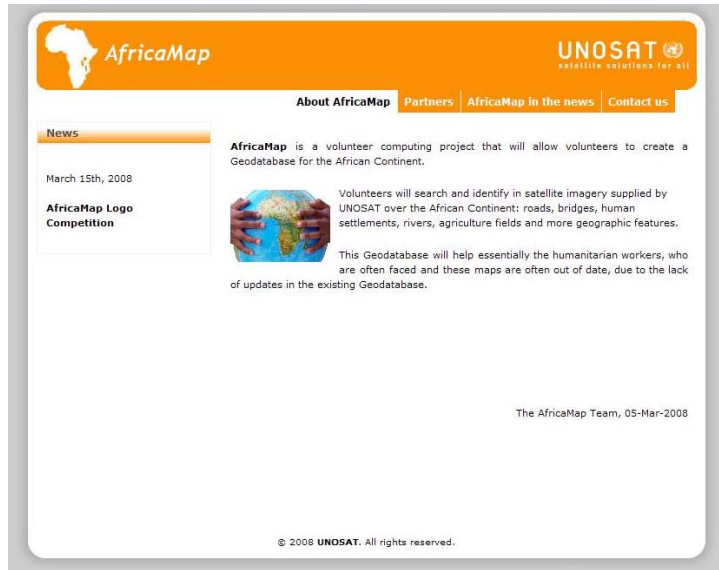
UN / NGO's / Governments  
Rapid Mapping  
Vector Maps  
Cartographic modeling  
Geostatistics

...



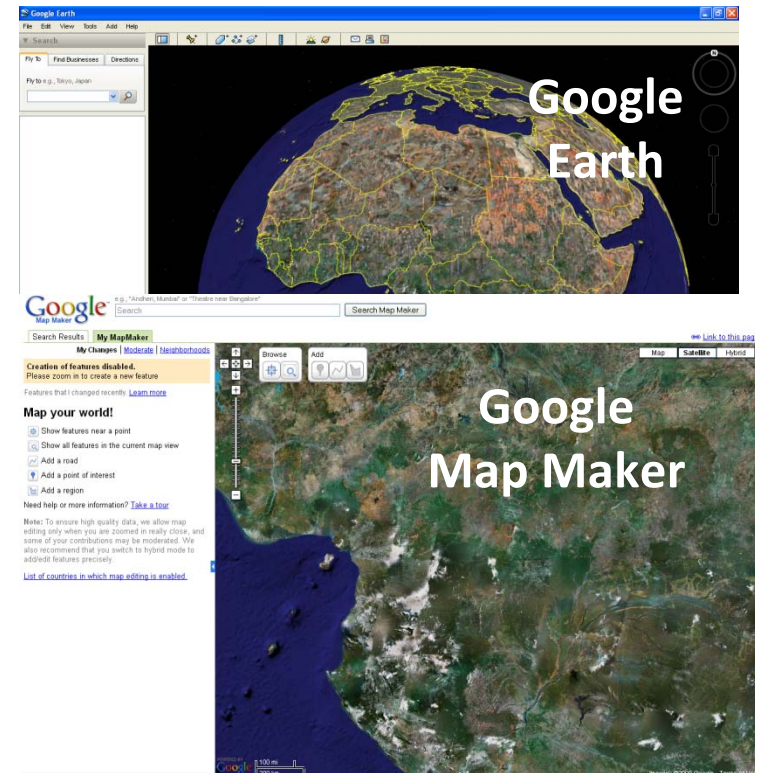


# AfricaMap Project



The screenshot shows the AfricaMap website. At the top, there is a navigation bar with 'AfricaMap' and 'UNOSAT satellite solutions for all'. Below this, there are tabs for 'About AfricaMap', 'Partners', 'AfricaMap in the news', and 'Contact us'. A 'News' section on the left lists an article from March 15th, 2008, titled 'AfricaMap Logo Competition'. The main content area describes the project as a volunteer computing project to create a Geodatabase for the African Continent. It mentions that volunteers search and identify features in satellite imagery, such as roads, bridges, human settlements, rivers, and agriculture fields. It also states that the Geodatabase will help humanitarian workers who are often faced with maps that are out of date. The footer includes '© 2008 UNOSAT. All rights reserved.' and 'The AfricaMap Team, 05-Mar-2008'.

Vs

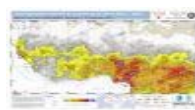


The top screenshot shows the Google Earth interface with a globe view of the African continent. The text 'Google Earth' is overlaid on the image. The bottom screenshot shows the Google Map Maker interface, which is a web-based tool for editing maps. It features a satellite view of a coastal region and various editing tools. The text 'Google Map Maker' is overlaid on the image.

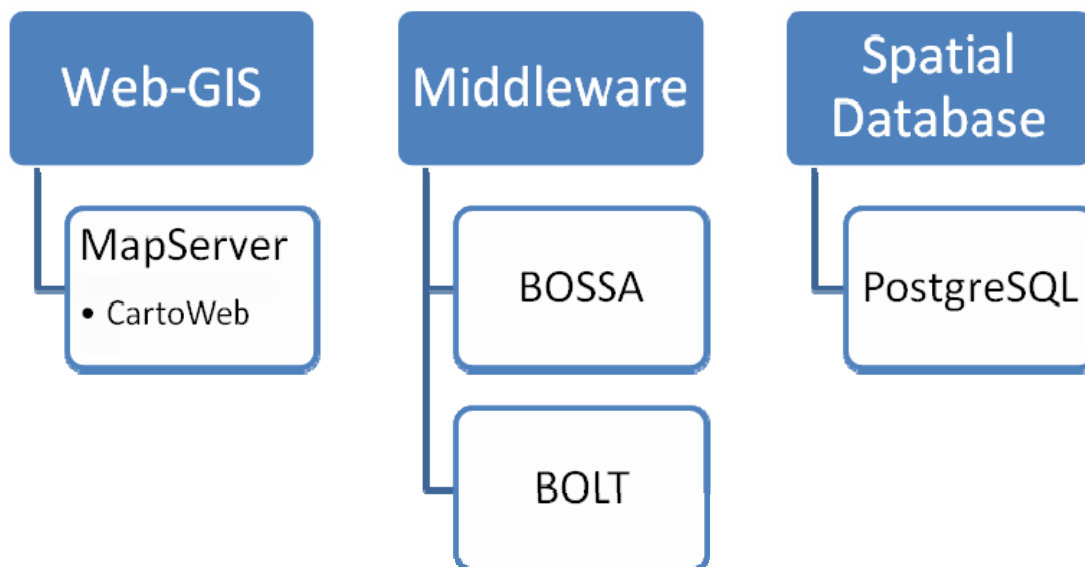
Image  
rectification  
&  
Orthorectification

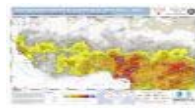
Task oriented

Greater  
quality  
control



## Building Blocks

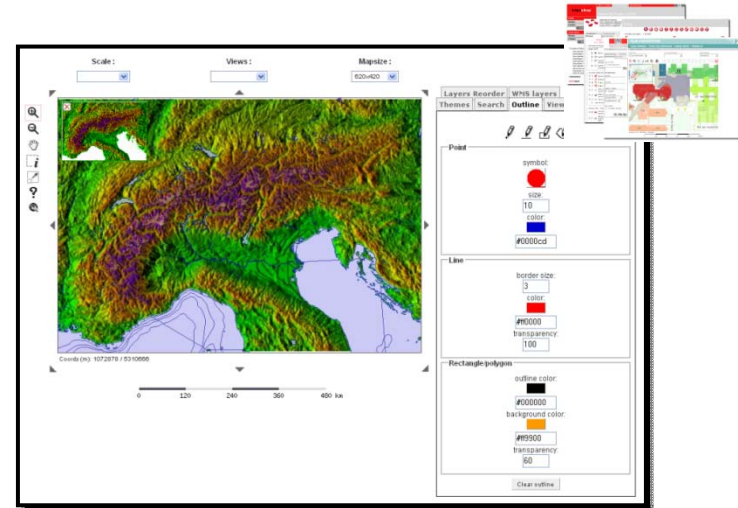




## Web-GIS: CartoWeb



& MAPSERVER =

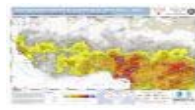


Open Source  
Base Camp

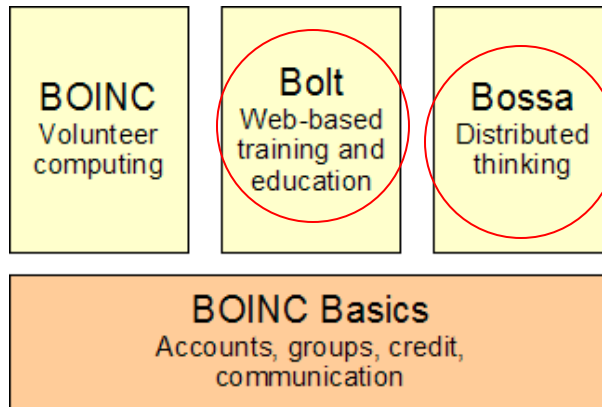
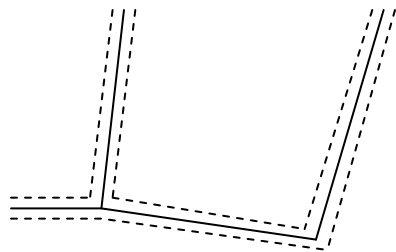
- ✓ Advanced cartographic output
- ✓ Cross-platform support
- ✓ A multitude of raster and vector data formats
- ✓ Map projection support

- ✓ Easy to use
- ✓ Framework for building advanced and customized applications
- ✓ Extensible
- +MapServer features

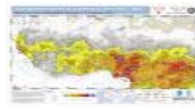




## Middleware: BOLT & BOSSA

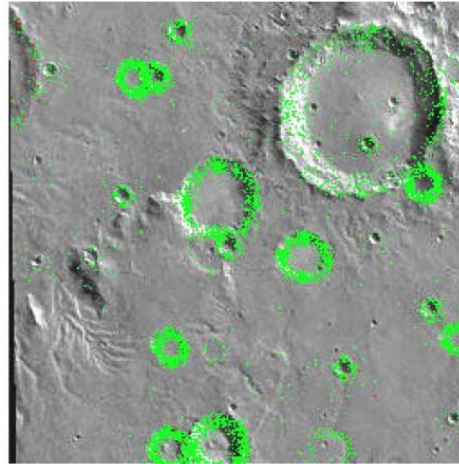


- ✓ Different levels of exercises adapted to the needs
- ✓ Dedicated learning exercises for specific requests (damage assessment, ... )

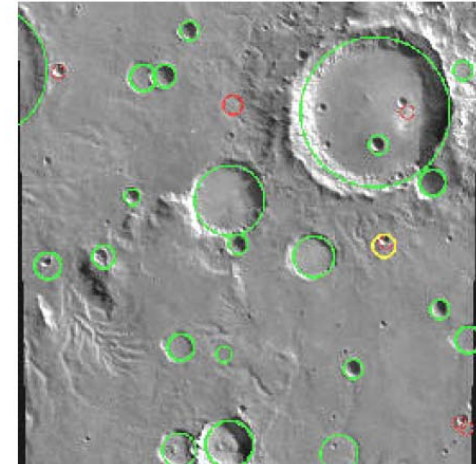


## Mars Clickworkers

First 6 months of operation:  
+ 85,000 users  
+1.9 million entries

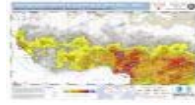


*Several volunteers  
covering each region*



*Consensus  
Blunder elimination*

*“automatically computed consensus of a large number of clickworkers is virtually indistinguishable from the inputs of a geologist with years of experience in identifying Mars craters.”*

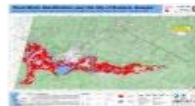
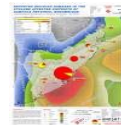
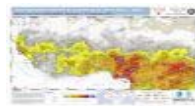


## STATUS

- ✓ Early development stage

## GOALS

- ✓ Compatibility between data created in both Desktop GIS software and Africamap
- ✓ Common UN platform for geographic data and web mapping service
- ✓ Capacity response for specific requests (sudden disaster situations)
- ✓ Generate quality data (national and region level)
- ✓ Comprise Historic maps and imagery



**Thank you!**